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10/670,590

09/25/2003

Yasunori Kaneda

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05/03/2006

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EXAMINER

SALAD, ABDULLAHI ELMI

ART UNIT

PAPER NUMBER

2157

DATE MAILED: 05/03/2006

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

10/670,590

Applicant(s)

KANEDA ET AL.

Examiner

Salad E. Abdullahi

Art Unit

2157

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 23 September 2003.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-26 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-26 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 23 September 2005 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some * c) ☐ None of:
- 1) ☒ Certified copies of the priority documents have been received.
 - 2) ☐ Certified copies of the priority documents have been received in Application No. _____.
 - 3) ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☒ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date 7/05&9/23.
- 4) ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____.
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: _____.

DETAILED ACTION

1. This application has been reviewed. Original claims 1-26 are pending. The rejection cited stated below.

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

2. Claims 1-26 are rejected under 35 U.S.C. 103(a) as being obvious over Karasudani et al. U. S. Patent Application Publication No. 2002/0059287[hereinafter Karasudani] in view of Kaneda et al., U. S. Patent Application Publication No. 2003/0204583[hereinafter Kaneda]
3. The applied reference has a common assignee and/or inventor with the instant application. Based upon the earlier effective U.S. filing date of the reference, it constitutes prior art only under 35 U.S.C. 102(e). This rejection under 35 U.S.C. 103(a) might be overcome by: (1) a showing under 37 CFR 1.132 that any invention disclosed but not claimed in the reference was derived from the inventor of this application and is thus not an invention "by another"; (2) a showing of a date of invention for the claimed subject matter of the application which corresponds to subject matter disclosed but not claimed in the reference, prior to the effective U.S. filing date of the reference under 37 CFR 1.131; or (3) an oath or declaration under 37 CFR 1.130 stating that the application and reference are currently owned by the same party and that the inventor named in the

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application is the prior inventor under 35 U.S.C. 104, together with a terminal disclaimer in accordance with 37 CFR 1.321(c). This rejection might also be overcome by showing that the reference is disqualified under 35 U.S.C. 103(c) as prior art in a rejection under 35 U.S.C. 103(a). See MPEP § 706.02(I)(1) and § 706.02(I)(2).

4. Claims 1-26 are rejected under 35 U.S.C. 102(e) as being anticipated by Karasudani et al. U. S. Patent Application Publication No. 2002/0059287[hereinafter Karasudani].

As per claim 1, Karasudani discloses a storage device comprising:

at least one storage (102) for storing data to be accessed by at least one computer (101) (see fig. 3);

a management interface (113) that receives from a management computer a storage region allocation request to allocate a storage region to the at least one computer (see figs. 7A-7E and paragraph 0103);

a storage region allocation module(115) that allocates to the at least one computer, according to the storage region allocation request, an unallocated storage region in the at least one storage in a manner accessible by the at least one computer (see paragraph 0103 and 0147).

Karasudani is silent regarding:

an access processing module that controls data access between the at least one storage and the at least one computer.

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a performance allocation module that allocates to the at least one computer, according to the storage region allocation request, performance of at least one target module that affects data access between the at least one computer and the storage region allocated Kaneda discloses an storage device including

an access processing module (210) that controls data access between the at least one storage and the at least one computer ((see paragraph 0049);and

a performance allocation module(400) that allocates to the at least one computer, according to the storage region allocation request, performance of at least one target module that affects data access between the at least one computer and the storage region allocated(see paragraph 0059). Therefore, it would have been obvious to one having ordinary skill in the art at the time of the invention presented with teaching of Karasudani to utilize the performance allocation module which includes the access processing module (210) as taught by Kaneda to ensure required performance by the allocation request.

As per claim 2-3, Kaneda discloses a storage device according to claim 1, wherein the at least one target module includes an interface that connects to the at least one computer, and the performance allocation module is a band control module for controlling band performance in the interface (see paragraph 0059).

AS per claim 3, Kaneda discloses a storage device according to claim 1, further comprising a cache that temporarily stores data to be moved between the storage and

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the at least one computer, wherein the performance allocation module is a cache allocation control module that controls, according to the storage region allocation request, an allocation amount of the cache that affects data access between the at least one computer and the storage region allocated (see paragraph 0061).

As per claim 4-6, Karasudani discloses storage device according to claim 1, further comprising a storage region management module that sets, according to an allocation release request from the management computer to release the storage region allocated, the storage region allocated to an unallocated storage region, wherein the performance allocation module releases, according to the allocation release request, performance guarantee that is set to the at least one target module computer (see paragraph 0103 and 0147).

As per claim 7-10, Karasudani discloses a storage device according to claim 1, further comprising a plurality of disk drives that manage a plurality of storage regions, wherein the storage region allocation request includes a policy concerning a randomness of accesses for the storage region that is a target of the storage region allocation request, and the storage region allocation module specifies at least one of the plurality of disk drives to allocate the unallocated storage region according to the policy concerning the randomness of accesses included in the storage region allocation request and random access performance information of parts of the plurality of storage regions that are already allocated to the disk drives computer (see paragraph 0103 and 0147).

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As per claims 11-26, the claims include features in claims 1-10 discussed above with respect to claims 1-10, thus claims 11-26 are rejected same rational as claims 1-10.

Conclusion

5. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

6. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Salad E. Abdullahi whose telephone number is 571-272-4009. The examiner can normally be reached on 8:30 - 5:00. If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Ario Etienne can be reached on 571-272-4001. The fax phone number for the organization where this application or proceeding is assigned is **571-273-8300**.

7. Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

Abdullahi Salad
Primary examiner
4/49/2006

ABDULLAH SALAD
PRIMARY EXAMINER